## 04 Running

A challenge to oneself, performance and endurance, running is an athletics event that has been practiced since ancient times, and features on the programme of all the Olympic Games.
Over the years, there have been many different types of races, from 100 meters to 42.195 kilometers, a on tracks and roads.

In 2024, the track events will take place at the Stade de France in Saint-Denis, north of Paris. The road races will take place in Paris.

Image number four shows two postures that are characteristic of sprint foot races: the start (bottom left) and the finish (top right).

In the bottom left-hand corner, the "starting blocks" are fixed to the floor. They consist of a horizontal base topped by racks onto which "shoes" are fitted to position the feet in the take-off position. These supports are generally fitted with 'false start' sensors.

The two parallel lines marked on the ground run along almost the entire width of the bottom of the board, delimiting the running lane for each runner. In the middle of the bottom of the board, a wider strip, slightly raised, marks the start line; it is perpendicular to the lane but here it is presented at an angle.

At the referee's first indication: "in position", all the bodies are crouched, each runner has just adjusted his starting blocks so that his feet no longer touch the ground.

First position, the figure is on all fours, in profile, below the shoulders, both forearms raised vertically above the hands, frozen on the tips of the fingers, level with the starting line.

The athlete is concentrating on waiting for the starting signal, his head bent forward.
At the second command: "On your marks", the hips and buttocks are raised, and the legs are ready to relax. Nobody should move any more. At "ready", you breathe in as much as you can.
The starting signal is given, the sound of a gunshot.
The impulse is transformed into coordination of arms and legs to manage acceleration and endurance. Behind the character, three parallel lines of difference in level represent the movement of this impulse.

To the right of his head, a horizontal line represents the ground at the finish. Above, in the second posture, the legs are in a long stride, followed by the upper body, leaning forward with the arms back. The head is also as far forward as possible.

Under the chin and in front of the torso, you can make out a small rectangle in relief which represents the finish line. In sprint races, it's difficult for the referees to separate the athletes immediately. They often arrive in groups.

In fact, at the finish line, special cameras capture almost 2,000 vertical images per second. This is the "photo finish" moment!

These images are then reproduced with the possibility of time shifts. The time lag between runners is greatly amplified and the difference can be measured in milliseconds! The measurement is taken at a precise morphological point where the shoulder meets the collarbone.

At the 2024 Paris Olympics, there will be 48 event finals, 23 men's, 23 women's and two mixed.
$100 \mathrm{~m}, 200 \mathrm{~m}, 400 \mathrm{~m}, 800 \mathrm{~m}, 1500 \mathrm{~m}, 5000 \mathrm{~m}, 10,000 \mathrm{~m}, 110 \mathrm{~m}$ hurdles, 400 m hurdles, 3000 m steeplechase, $4 \times 100 \mathrm{~m}$ relay, $4 \times 400 \mathrm{~m}$ relay. On the road, 20 km of fast walking and 42,195 Kilometers for the Marathon.

This distance commemorates the race run in 490 BC by the Greek messengers "Philippides" between Athens and Marathon, to announce the victory of the Greeks over the Persians, marking the end of the First Medieval War.

